Editorial

Holiday Reading

I read an interesting book whilst on holiday recently. It was one of those books that one finds difficult to put down. By a popular author, Bill Bryson, *A Short History of Nearly Everything* covers the whole of the history of science, the 'big bang', the origin of life and the evolution of our knowledge of the world – covering geology, biology, evolution, chemistry, physics, tectonics and so much more. History can be so fascinating, especially when it is about science and the personalities involved! I certainly learnt something new (well a lot of things, actually).

I admire the ability of someone with a non-scientific background to grasp some difficult scientific concepts and their implications and to communicate them so well. It is a well researched book. If you have not read it, I commend it to you. It is one of those books that should excite youngsters and attract them into science. And it is very readable. No wonder it is high on the 'best seller' lists.

One of the things that I found fascinating was the number of times significant advances in our knowledge are proposed (often by someone on the fringe) which were rejected by the scientific establishment at that time, only for them to be proved and accepted much later. It appears to suggest that even scientists can have closed minds to new ideas and concepts. Is that still true today? I rather suspect it is!

Many years ago, I well remember an ambitious and able chemistry colleague, at a research laboratory where I once worked, explaining why gold was not able to be a good catalyst unlike the other precious metals. Something to do with the electronic structure of the gold atom, as I recall.

We now know differently, of course, but the story demonstrates man's innate instinct to rationalise what he observes to fit his accepted level of knowledge. I notice this tendency in me to have increased as I have got older. It is not always easy to keep an open mind when new ideas are floated.

Mature technologies....

As we have often pointed out, many of gold's current (and mature) industrial applications are materials based, where gold is used for its bulk metallic properties. As we see in the pages of this journal, much of the new emerging science and technology is oriented to the chemistry and surface science of gold and it is from these fields where we anticipate the new commercial applications will develop.

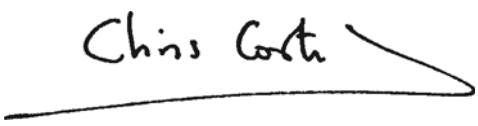
There is an accepted view that the materials science/metallurgy of gold is a mature field in which almost all is known and little new is likely to emerge. So I continue to be surprised that there are new developments in this area - gold shape memory alloys and amorphous (glassy) metals to name two, for example - which attract the headlines and have potential commercial applications. Both are in areas that have been well researched and exploited in the past but where gold has not featured strongly. So where else should we explore – superplasticity, solid state lubrication, gold as an alloying metal in base metal alloys? No doubt, you could add to this list of possible fields. Clearly, there is still a lot of scope for innovation, even in so-called mature technology areas.

This issue...

This issue completes volume 38, which is the first as an E-journal. Have you enjoyed GB (as we call it in the office) in this new format? Do let us know how you think we can improve it.

Following the last issue's emphasis on materials-oriented science, we revert back to normal and feature chemistry and catalysis. I hope you all find something of interest.

Enjoy this issue,



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